

NOTES ON PALMAE, I.

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There has been a marked increase in the completion of local, insular, and geographical floras recently. Such publications are invaluable, not only to botanists of the area, but to scientists in other fields of study as well. This is especially true in ecology, pollination biology, vertebrate ecology, endangered species studies etc. where an accurate identification of the taxon is necessary for reliable scientific reports, or for repetition of certain observations and experiments. The following new Coccothrinax species is published in anticipation of the publication of a new Flora of the Cayman Islands soon to go to press. The name of the palm honors George R. Proctor, author of the flora and a most knowledgeable authority on Caribbean botany.

COCCOTHRINAX PROCTORII sp. nov.

Palmae solitariae caulibus 2-5 m. altis; folii pagina abaxialis argentea vel auricolor, dense lepidota squamulis persistentibus hyalinis, palmine (15-)18-30 cm. longo, segmentis 39-48, eis centralibus (52-)61-80 cm. longis (2.5-)3.2-4.2 cm. latis, vagina ex reti fibroso subtili constanti; inflorescentia brevis 5-7-partita, floribus eburneis, staminibus ca. 10, antheribus 1.6-2.4(-3.1) mm. longis; stigma et stylus ovario longiores. Specieis haec ab Coccothrinace jamaicense, C. argentata, et C. readii praecipue differt fibris fasciculis ingentibus laminae.

Trunk 2-5(-10) m. high, or possibly more, smooth, gray, slender columnar, solitary, unarmed.

Leaf blade circular in outline, with 39-48 narrowly trullate segments (52-)61-80 cm. long, (2.5-)3.2-4.2 cm. wide at the widest (which may or may not be at the point of connation), connate in the palman (15-)18-30 cm., tapering to a very slightly bifid apex, adaxial surface dark glossy green, principal nerves of recently expanded blade with caducous scales; abaxial surface appearing bright silvery to golden, covered with a dense indumentum of persistent irregularly shaped and interlocked fimbriate scales, the stalk or central portion of each scale conspicuous as a dark-colored dot; hastula various in outline and width (2.0-3.3 cm. wide) depending partially on extent to which the blade is expanded, at first often vested with an indumentum of adpressed gray scales, free adaxial extension 0.5-1.0 cm. long, conspicuously ciliate; petiole acipitous (32-)75-80 cm. long by 1.1-2.5 cm. wide; abaxial surface of petiole usually densely covered with white scales that are soon lost along the central convex portion, those along the margins extending beyond margins;

sheath very slightly linguiform, woven of medium to fine fibers ca. 0.5 mm. thick, at first covered with white scales.

Inflorescence composed of 5-7 or more primary branches, the lowermost branch ca. 15-25 cm. long to apex, the terminal primary branch often not fully exposed; the primary bracts sparsely lepidote apically, less so basally; each primary branch once-compound with 17-40 ultimate branches, the peduncle of each primary branch usually lepidote with scattered to densely arranged caducous arachnoid scales at anthesis; the ultimate branches glabrous (3.4-)7.5-12.0 cm. long, with 30-45 or more pedicellate flowers. Flowers fragrant, white at anthesis, soon becoming creamy-white; pedicels at anthesis (1.2-)1.6-3.0(-3.5) mm. long; stamens about 10 in number, about equaling pistil; anthers 1.6-2.4(-3.1) mm. long; pistil pyriform, style elongate, usually straight, stigma and style (1.0-)1.2-2.0(-2.2) mm. long. Fruit purple-black at maturity like other species possibly passing through a whitish and pink stage first; mature fruiting pedicels (0.5-)1.0-4.0 (-5.4) mm. long; seed (4.5-)5.0-5.4(-5.9) mm. in diameter.

TYPE SPECIMEN: - Proctor 27991 collected 9 June 1967, east of Savannah Village on Grand Cayman. Holotype at IJ, isotype at US.

VERNACULAR NAME: - Thatch Palm

DISTRIBUTION: - Endemic to the Cayman Islands, where the species is "common in fields and woodlands", "throughout the islands on dry ground", and "dry wind-swept thickets on limestone". (Proctor Nos. 29045, 27991, and Brunt 1643).

SPECIMENS EXAMINED: CAYMAN ISLANDS: Grand Cayman. East of Savannah Village: 9 June 1967, Proctor 27991 (holotype IJ, isotype US). Newlands Barcadere Road: 16.7.65, M. Brunt 1643 (IJ). Gun Bay, on old coral beach ridges: 7 June 1967, J. D. Sauer. 4091 (WIS). Little Cayman. Thickets on sand ridge near west end of Charles Bight: 4 Aug. 1975, Proctor 35082 (IJ). Rocky thickets, near Snipe Point: 7 July 1967, Proctor 28033 (4 sheets) (IJ). "Near a vast expanse of wild Coccothrinax, along road of difficult access." 16 Nov. 1979, S. L. Olson, C. A. Meister, & H. F. James, USNH Reg. No. 338,476 (US). Cayman Brac. Raised beach, limestone ironshore formation, S. Coast: 25.7.65, M. Brunt 1674 (IJ). Near North-East Point: 8 Aug. 1968, Proctor 29045 (IJ). (2 sheets). Cultivated. United States Dept. Agric. Plant Introduction Station, Miami, Florida: 23 Apr. 1965, Read 1401 (US), seed originally collected by Fairchild and Dorsett on expedition to "Georgetown, Grand Cayman Isl. Mar. 1933."

DISCUSSION: - Coccothrinax proctorii belongs to a group of closely allied species distributed throughout the western Caribbean. Until recently, the lack of adequate field observations and comparable herbarium material has hampered an understanding of these ecologically and morphologically similar taxa. Such species are difficult to distinguish on morphological grounds unless complete material is available.

Morphologically, C. proctorii is distinguished by its flowers having the combined length of the stigma and style

greater than the length of the ovary. The length of the pedicels averages at least a millimeter to a millimeter and a half longer than those of *C. jamaicensis*, and the free portion of the leaf hastula rarely exceeds 1 cm. (based on relatively few samples). An adequate sample of leaf sheaths (mature but unexpanded) and leaf hastulas (also mature but unexpanded) would likely yield additional morphologically sound distinctions. Nevertheless, the taxa can be readily distinguished anatomically even on fragmentary material. Both living material and dried herbarium specimens present a strikingly silvery and frequently golden color on the undersurface of the leaves.

Based on numerous samples, the primary distinguishing features of the laminar anatomy are: an almost continuous band of girder-like fiber-bundles immediately below the adaxial hypodermis, mostly connected with each other adaxially and projecting well into the palisade region; but only rarely extending into the nearly continuous single row of hypodermal cells (Fig. A). In *C. jamaicensis* (Fig. B), with which this new taxon is most easily confused, the fiber-bundles appear as an irregular broken band of small clusters of few fibers each, not prominently intruding into the palisade region, but frequently interrupting the cells of the adaxial hypodermal layer.

Comparison of the leaf anatomy of the two taxa immediately reveals why the Cayman Islands species lends itself to rope making while the Jamaican species does not.

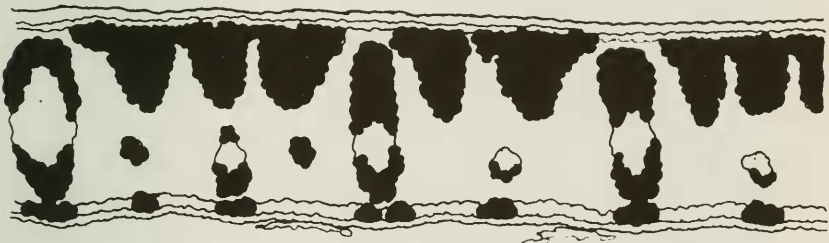


Fig. A



Fig. B